



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/682,247	10/09/2003	Daniel R. Dorrance	HE 8710US	1016
1688	7590	11/30/2005		
POLSTER, LIEDER, WOODRUFF & LUCCHESI 12412 POWERS COURT DRIVE SUITE 200 ST. LOUIS, MO 63131-3615			EXAMINER RATCLIFFE, LUKE D	
			ART UNIT	PAPER NUMBER
			3662	
DATE MAILED: 11/30/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/682,247	Applicant(s) DORRANCE ET AL.	
	Examiner Luke D. Ratcliffe	Art Unit 3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 4-8 and 10-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 19-27 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 09 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 19, 21, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by January (5675515).

Referring to **claim 19**, January shows an improved machine vision vehicle wheel alignment system with at least one unique reference target structured associated with the service bay disposed within the view of at least one camera from the first and second camera systems (figure 5 Ref 73), and a data processor is configured to utilize identified relationships between at least one unique reference target structure and the camera systems to establish a common reference coordinate system (column 12 lines 45-62).

Referring to **claim 21**, January shows an improved machine vision vehicle wheel alignment system wherein the data processor is further configured to store one or more calibration values associated with the service bay (column 11 lines 21-45).

Referring to **claim 26**, January shows acquiring images from both a first and second camera systems (figure 5) and the using the reference coordinate system of the first and second camera to create a common reference coordinate system (column 12 lines 45-62).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims **1-3 20, 22-24, and 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over January (5675515) in view of Jackson (6731382).

Referring to **claim 1**, January shows a machine vision vehicle wheel alignment system with a first and a second camera systems disposed to view optical targets disposed on the side of a vehicle wherein the data processor is configured to establish a common reference coordinate system between the first and second camera systems utilizing the images obtained by the camera systems (column 12 lines 45-62). January does not show a first and a second camera system that are configured for independent movement.

Jackson shows a first and a second camera system that are configured for independent movement (figure 6b), Jackson also teaches that a common reference coordinate system can be determined between both camera systems (paragraph 6).

It would have been obvious to modify January to include the first and second camera systems that are configured for independent movement as taught by Jackson because this type of system has the ability of self calibration as taught by Jackson.

Referring to **claim 2**, January shows a machine vision vehicle wheel alignment system that includes at least one reference target structure that is disposed within a field of view of the first and second camera systems (figure 5 Ref 73), and a data processor is configured to utilize identified relationships between at least one reference target structure and the camera systems to establish a common reference coordinate system (column 12 lines 45-62).

Referring to **claim 3**, January shows a reference target structure that includes a first target disposed within the field of view of the first camera (figure 5 Ref 75) and a second target disposed within the field of view of the second camera (figure 5 Ref 74).

Referring to **claim 20**, January shows an improved machine vision vehicle wheel alignment system with at least one unique reference target structured associated with the service bay disposed within the view of at least one camera from the first and second camera systems (figure 5 Ref 73), and a data processor is configured to utilize identified relationships between at least one unique reference target structure and the camera systems to establish a common reference coordinate system (column 12 lines 45-62).

Jackson shows a first and a second camera system that are configured for independent movement (figure 6b), Jackson also teaches that a common reference coordinate system can be determined between both camera systems (paragraph 6).

It would have been obvious to modify January to include the first and second camera systems that are configured for independent movement as taught by Jackson because this type of system has the ability of self calibration as taught by Jackson.

Referring to **claim 22**, January shows a method for configuring a machine vision vehicle wheel alignment system including acquiring images of a first set of optical targets with the first camera system (figure 5), acquiring images of a second set of optical targets with a second camera system (figure 5), acquiring at least one image of a common reference target structure (figure 5) and establishing common reference coordinate system (column 12 lines 45-62). January does not show acquiring at least one image of a common reference target with each of the first and second camera systems.

Jackson shows acquiring images of at least one of a common reference target with each of the first and second camera systems (figure 6b), Jackson also teaches using the images to create a common coordinate system (paragraph).

It would have been obvious to modify January to include the first and second camera systems that are configured for independent movement as taught by Jackson because this type of system has the ability of self calibration as taught by Jackson.

Referring to **claim 23**, Jackson shows a first and a second camera system that are configured for independent movement (figure 6b), Jackson also teaches that a common reference coordinate system can be determined between both camera systems (paragraph 6).

Referring to **claim 24**, January shows acquiring images from both a first and second camera systems (figure 5) and the using the reference coordinate system of the first and second camera to create a common reference coordinate system (column 12 lines 45-62).

Art Unit: 3662

Referring to **claim 27**, January shows acquiring images from both a first and second camera systems (figure 5) and the using the reference coordinate system of the first and second camera to create a common reference coordinate system (column 12 lines 45-62). January does not show that the first and second camera systems are independently moveable.

Jackson shows acquiring images of at least one of a common reference target with each of the first and second camera systems (figure 6b), Jackson also teaches using the images to create a common coordinate system (paragraph).

It would have been obvious to modify January to include the first and second camera systems that are configured for independent movement as taught by Jackson because this type of system has the ability of self calibration as taught by Jackson.

Allowable Subject Matter

Claim 9 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luke D. Ratcliffe whose telephone number is 571-272-3110. The examiner can normally be reached on 8:00-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on 571-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3662

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LDR

A handwritten signature in black ink, appearing to read "Thomas H. Tarcza".

THOMAS H. TARCZA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600